

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA**

FEDERAL TRADE COMMISSION,)	
)	
Plaintiff,)	
)	Civ. A. No. 16-1669
v.)	Senior Judge Nora Barry Fischer
)	
INNOVATIVE DESIGNS, INC.,)	
)	
Defendant.)	

MEMORANDUM OPINION

I. INTRODUCTION

This is an action under the Federal Trade Commission Act (“FTC Act”), 15 U.S.C. § 53(b), in which the Plaintiff Federal Trade Commission (“FTC”) alleges that Defendant Innovative Designs, Inc. (“IDI”) violated Section 5(a) of the FTC Act (“Section 5(a)”), 15 U.S.C. § 45(a). (Docket No. 1 ¶ 1). A non-jury trial was commenced before the undersigned on July 29, 2019 and July 30, 2019. (Docket Nos. 201-02). At the end of the FTC’s case-in-chief, IDI moved to exclude or strike the FTC’s only testifying expert, Dr. David Yarbrough, which motion this Court granted. (Docket Nos. 196; 202 at 7-8; 207-08). IDI now asserts that its FED. R. CIV. P. 52(c) motion should be granted because the FTC has failed to put forth sufficient expert testimony to prove that IDI’s representations pertaining to Insultex House Wrap (“Insultex”) were false or lacked a reasonable basis. (Docket Nos. 224-25). Upon consideration of the trial record, the parties’ submissions, and based on the following findings of fact and conclusions of law, judgment will be entered in favor of IDI and against the FTC.

II. PROCEDURAL HISTORY

On November 3, 2016, the FTC filed a three-count complaint against IDI. (Docket No. 1). The Complaint alleges that IDI violated Section 5(a) by: (1) making false and unsubstantiated

performance claims; (2) asserting false establishment claims, and (3) providing the means and instrumentalities for deceptive acts in advertising, promoting, offering for sale, and selling Insultex. (*Id.* ¶¶ 29-33). Specifically, the FTC contends that IDI deceived its customers when it represented that its 1 mm product had an R-value¹ of R-3, its 1.5 mm product had an R-value of R-6, and using Insultex would result in energy savings. (*Id.* ¶ 2; Docket Nos. 171; 209). In its Answer, IDI responded:

Insultex . . . is a unique and state of the art product. IDI has devoted substantial time, effort[,] and expense to fully vet Insultex . . . , both prior to marketing the product with the R-value performance claims and subsequent to the initiation of the instant Complaint, and to obtain R-value testing results from an ISO accredited laboratory (hereinafter sometimes referred to as the “Laboratory”). Insultex . . . has undergone rigorous testing and hundreds of tests by the Laboratory employing differing variables under various conditions. Those certified test results verify that Insultex . . . does, in fact, possess an R-3 or R-6 rating. IDI has received numerous unsolicited testimonials from very satisfied customers relating to Insultex. . . . These specific testimonials substantiate IDI’s assertions that Insultex . . . does, in fact, deliver superior energy efficiency over products marketed by [its] competitors. IDI’s promotional materials and marketing statements are the product of, and were at all times material hereto made in reliance upon, competent and reliable scientific testing. IDI reasonably relied on those testing results of the Laboratory in marketing Insultex . . . as possessing R-values of R-3 or R-6 and providing energy savings for consumers. Neither IDI nor the FTC has ever received a customer complaint regarding Insultex. . . . Upon information and belief, the FTC initiated its investigation into Insultex . . . at the instigation of IDI’s competitors.

(Docket No. 7 ¶ 2).

The matter proceeded through discovery² and motions practice. (Docket Nos. 13; 60). Recognizing that this case would turn on expert testimony, the parties directed their motions to the use of experts. (Docket Nos. 60-61; 65). IDI moved to disqualify Dr. Yarbrough arguing that

¹ An insulation product’s R-value is the numeric measure of that product’s ability to restrict heat flow and, thus, to reduce energy costs — the higher the R-value, the better the product’s insulating ability. (*Pretrial Stipulations*, Docket No. 127 ¶ 9); *see* 70 Fed. Reg. 31258 (May 31, 2005) (emphasis added) (“R-value is the numerical measure of the ability of an insulation product to restrict the flow of heat and, therefore, to reduce energy costs—the higher the R-value, the better the product’s insulating ability”).

² The deadline for fact discovery was extended twice for good cause. (Docket Nos. 52; 58). Expert discovery was also extended for good cause shown. (Docket No. 95).

because IDI had previously contracted with R&D Services to perform testing on Insultex, the FTC was prohibited from designating him as an expert given his employment relationship with R&D Services. (Docket No. 65). This Court disagreed finding that Dr. Yarbrough's prior testing and his relationship with IDI was not a basis for disqualification, (Docket No. 93 at 18), because "IDI did not disclose any confidential information to him during this case and his [consultation was] based entirely on discoverable and publicly-available information." (*Id.*) Rather, the prior relationship was a credibility factor that the Court would "consider when assessing the veracity of his testimony during the eventual bench trial in this matter." (*Id.*)

IDI next sought leave to submit Dr. Anastassios Mavrokefalos's sur-rebuttal or supplemental expert report. (Docket No. 99). IDI argued that the report of Dr. Jonathan Malen, the FTC's rebuttal expert, not only repeated opinions found in Dr. Yarbrough's report but also "introduced subject matter, opinions, theories[,] and calculations not previously raised in the FTC's case-in-chief." (*Id.*) IDI's motion was granted, and the Court ordered that any additional depositions of Dr. Mavrokefalos be completed by September 27, 2018.³ (Docket No. 111).

The Court then issued a Pretrial Order and the matter was set for trial to begin on January 22, 2019.⁴ (Docket No. 101). The parties filed their respective pretrial statements, witness lists, designation of deposition excerpts, and pretrial stipulations.⁵ (Docket Nos. 112-13; 121; 125-28;

³ This deadline was later extended until October 31, 2018. (Docket No. 119).

⁴ This Court granted the FTC's Amended Motion for a Stay of Trial and Related Deadlines in Light of United States Government Cessation. (Docket Nos. 150-51). This was the second time this case had to be stayed due to a lapse in appropriations. (Docket No. 70). After the stay was lifted, the matter was set for trial to begin on July 29, 2019. (Docket No. 158).

⁵ The parties stipulated to:

the admissibility of the expert report and attachments of [Dr.] Yarbrough (J212); the expert rebuttal reports and attachments of Dr. Yarbrough (J213) and Dr. Jonathan Malen (J214); and the expert report and attachments of Mr. Scott Baumann (J215). Neither party [agreed] to the substance or the veracity of the reports.

(Docket No. 186 ¶ 1). The parties also stipulated to the areas of expertise of Drs. Yarbrough and Malen. (*Id.* ¶ 2). The parties further stipulated that Dr. Malen was an expert in the fields of heat transfer, mechanical engineering,

143-44; 163; 180; 183-84; 186; 190). In its witness list and amended witness list, the FTC represented that it would call Dr. Yarbrough and might call Drs. Mavrokefalos and Malen. (Docket No. 121); (*see* Docket No. 143) (providing the FTC would call Dr. Mavrokefalos). Dr. Mavrokefalos was actually one of IDI's experts at that time. (Docket No. 110).

With respect to Dr. Mavrokefalos, the FTC amended its proffer to read:⁶

[He] is an Assistant Professor of Mechanical Engineering at the University of Houston. The FTC will call Dr. Mavrokefalos to testify, via deposition, regarding opinions contained in his original expert report as well as his [s]ur[-r]ebuttal, including opinions that are contrary to those held by [IDI's expert,] Dr. [Donald V.] Garlotta. Specifically, if called to testify, Dr. Mavrokefalos will testify that the R-value of air is not negligible and that where a heat flux transducer is placed within an ASTM C518 setup does not influence the reported R-value, because the transducer measures the heat flux within the system itself. Dr. Mavrokefalos also will testify regarding matters testified to at his October 30, 2018, [sic] deposition, including that: his prior opinions about the R-value of Insultex were incorrect; the R-value of Insultex is less than R-1; his opinion that the R-value of Insultex is less than [R-]1 is based entirely on his own testing; he conducted three additional tests of Insultex which unequivocally demonstrate the R-value of Insultex is less than R-1; he would disagree with any expert opinion that a standard ASTM C518 test significantly alters the R-values of Insultex, such that the R-values measured and reported would be below R[-]1; IDI's thermal resistance testing unit cannot accurately measure R-value for materials less than R-1; IDI does not have a reasonable basis to claim an R-value of R-3 or R-6 for Insultex; IDI did not have a good faith basis to claim R-3 at the time it began marketing Insultex; and other matters testified to during his October 30, 2018 deposition.

(Docket No. 143).

thermal transport, and experimental measurement of thermal transport. (*Id.*) No agreement was reached as to Dr. Mavrokefalos's areas of expertise. (*See id.*)

⁶ In its initial offer of proof, the FTC wrote:

[he] is an Assistant Professor of Mechanical Engineering at the University of Houston. The FTC may call Dr. Mavrokefalos to testify, either live or via deposition, regarding opinions contained in his original expert report as well as his [s]ur[-r]ebuttal, including opinions that are contrary to those held by Dr. Garlotta. Specifically, if called to testify, Dr. Mavrokefalos will testify that the R-value of air is not negligible and that where a heat flux transducer is placed within an ASTM C518 setup does not influence the reported R[-]value, because the transducer measures the heat flux within the system itself. Dr. Mavrokefalos's deposition is scheduled for October 30, 2018. The FTC cannot determine the full scope of his expected testimony until after that deposition. Should the scope change, the FTC will amend Dr. Mavrokefalos's Offer of Proof.

(Docket No. 121).

The FTC's offer of proof for Dr. Malen read:

[He] is a tenured Professor of Mechanical Engineering at Carnegie Mellon University,[sic] in Pittsburgh, Pennsylvania. If called to testify, Dr. Malen will present the opinions contained in his expert report, which rebut IDI's experts' expected testimony. Dr. Malen bases his opinions on quantitative predictions drawn from well-established scientific principles as well as his own expertise in the relevant field. Specifically, Dr. Malen will testify that IDI's claims are false and unsubstantiated because IDI's testing measured the R-value of Insultex . . . in a series or assembly with two $[\frac{3}{4}]$ -inch air gaps, rather than measuring the R-value of Insultex . . . alone. Dr. Malen will employ universally accepted heat transfer principles to demonstrate that the R-value of air is not negligible. Moreover, Dr. Malen will testify that, pursuant to [the] well-established history of thermal transport in porous materials, Insultex's purported composition as a closed cell evacuated low-density polyethylene cannot account for the product's claimed R-value, as Drs. Mavrokefalos and Garlotta speculate. In addition, Dr. Malen will testify that ASTM C518 testing did not compress Insultex . . . , as Drs. Mavrokefalos and Garlotta hypothesized. Further, Dr. Malen will testify that even if testing compressed the house wrap, such compression would not account for the difference between IDI's claimed R-3 and R-6 to actual test results showing an R-value of no more than R-0.4. Dr. Malen will also testify that no matter the placement of the heat flux transducer in an ASTM C518 test, the test will measure whatever air gaps are included in the system, and that the product's undulations will add R-value, not subtract it, contrary to IDI's experts' expected testimony. Finally, Dr. Malen will testify that the methodologies that both Dr. Yarbrough and TA Instruments employed in testing Insultex . . . are generally accepted as reliable and comport with the R-values he obtained with his predictive methodology.

(Docket No. 121) (emphasis added).

Subsequently the Court entertained motions in limine and objections to trial exhibit designations, and made rulings on same. (Docket Nos. 132-33; 135-36; 137; 140; 160-62; 165; 181; 191-92). IDI moved to preclude the FTC from using Dr. Mavrokefalos's reports and depositions at trial given that it had withdrawn him as a testifying expert. (Docket No. 135). This was because Dr. Mavrokefalos remarkably changed his opinion prior to his October deposition. (*Id.*; Docket No. 159). The Court denied the motion ruling that the FTC was "permitted to introduce the relevant portions of his deposition testimony at the upcoming bench trial and/or call

him as a witness, at its expense.”⁷ (Docket No. 161) (emphasis added).

The Court likewise denied the FTC’s *Daubert* challenge to Dr. Garlotta’s expert opinion finding that the FTC’s argument went to the weight of the testimony, which is properly addressed through cross-examination at trial. (Docket No. 160). But, the Court did grant the FTC’s motion to preclude further supplementation of Dr. Garlotta’s report.⁸ (Docket No. 192).

At the Final Pretrial Conference, the FTC again represented that it would be calling Dr. Yarbrough as part of its case-in-chief and Dr. Malen on rebuttal.⁹ (Docket No. 187 at 2). The FTC requested the opportunity to read certain portions of Dr. Mavrokefalos’s deposition into the record that it believed the Court should hear prior to Dr. Yarbrough’s testimony. (*Pretrial Conference Transcript 7/23/19* at 121-22). In response,

[t]he Court reiterated its strong preference that it be provided with the relevant deposition designations instead of them being read into the record given the Court’s time constraints. [The] FTC agreed to file of record its initial designations of Dr. Mavrokefalos for the Court’s review in anticipation of Dr. [Yarbrough]’s testimony.

(Docket No. 187 at 2). The FTC made clear that in addition to filing the winnowed down portion of Dr. Mavrokefalos’s deposition, it would be moving for the admission of his deposition

⁷ The Court also denied the FTC’s motion to exclude IDI’s evidence and testimony that it acted in good faith. (Docket No. 162). In addition, it denied the FTC’s motion to exclude the lay witness testimony of Andy Lindus. (Docket Nos. 170; 181). Mr. Lindus has purchased large quantities of Insultex and was going to be called to testify that he purchased Insultex for reasons other than its represented R-value. (*Id.*)

⁸ In rendering its decision, this Court found “IDI’s delay until July 15, 2019 to seek leave to file Dr. Garlotta’s rebuttal report disregard[ed] the Court’s expert discovery deadlines and the Federal Rules of Civil Procedure.” (Docket No. 192 at 3). Weighing the *Meyers v. Pennypack Woods Home Ownership Association*, 559 F.2d 894, 904-03 (3d Cir. 1977), factors, the Court stated that:

- The FTC would be prejudiced if Dr. Garlotta’s rebuttal report was allowed to come in;
- The prejudice could not be cured given that the trial was only days away;
- Reopening discovery would disrupt an orderly and efficient trial;
- Dr. Garlotta’s hourly rate was only \$100/hour, yet IDI had waited months to seek his opinion; and
- IDI would not be prejudiced by the exclusion.

(*Id.*)

⁹ IDI planned to call Dr. Garlotta; Joseph Ricilli, the principal of IDI; Greg Domian, an employee at IDI; and Peter Tyra and John Richey, two customers. (*Pretrial Conference Transcript 7/23/19* at 124-25). The parties took Andy Lindus’s de bene esse deposition prior to the trial. (Docket No. 201 at 16).

designations as well as the FED. R. CIV. P. 30(b)(6) deposition of Perry Johnson Laboratory Accreditation, Inc. (“PJLA”) as set forth in its third amended deposition designations. (*Pretrial Conference Transcript 7/23/19* at 118, 122).

Relative to the procedure for moving in the designations, the following discussion occurred:

THE COURT: All right. Is there anything else then for the good of the order here today by way of pretrial? Anything that we’ve missed, Mr. Patterson.

MR. PATTERSON: I have a question, Your Honor on the deposition designations. When it’s my turn, I’m going to offer certain designations into evidence. I know you have copies of everything.

THE COURT: I do.

MR. PATTERSON: Do you want me to provide the designations to the court.

THE COURT: We have the designations that have been filed and fortunately for you, I still have two interns and the interns have been asked to take your designations and flag the deposition pages, that’s what I’m having them do. We lose one of the interns on Friday. We still will have one through the course of the trial. He’s going to be with us until mid[-]August, so that’s what we’re doing so, you know, you were offering, I guess in a sense to give me the pages and whatnot. I don’t think you need to do that again.

MR. PATTERSON: Okay.

THE COURT: I should be able to figure it out based on the transcript and page and line and I have hard copies of all the transcripts. Some of which I already had prior because of the *Daubert* challenges and other motions brought here, but for purposes of this proceeding, we’ll just be looking at what’s flagged, if you will.

But ultimately, this is going to come down to, you know, in effect, a summary judgment style proceeding because what’s going to happen is, when you do your findings of fact, I’m going to ask that you point to the record to tell me, you know, where this is based so we can go back through the transcript, whether it’s the week long transcript or the individual deposition transcript.

(*Id.* at 125-26). Before the trial began in accordance with this Court’s instructions, the FTC filed of record the deposition excerpts of Dr. Mavrokefalos that it had planned to read at trial. (Docket

No. 190).

On July 29, 2019, this Court began what was to be a five-day bench trial. (Docket Nos. 158; 168; 187). In its opening, the FTC stated, “[t]he FTC’s burden in this case, Your Honor, is to prove by a preponderance of the evidence that IDI’s R-value and energy savings claims are misleading. . . . And to prove this, the FTC will introduce the testimony of [Dr.] Yarbrough” and Dr. Mavrokefalos (by means of deposition). (Docket No. 201 at 4, 7). To advance its position, the FTC explained that it would be introducing expert testimony that ASTM C518 testing was the “consensus standard” to measure R-value. (*Id.* at 6).

At the end of its opening, the FTC moved for the admission of exhibits J1 through J242 (subject to the Court’s pretrial rulings at Docket No. 191),¹⁰ the joint stipulations found at Docket Nos. 127 and 186, and the FTC’s third amended designations and counter designations found at Docket Nos. 183-84 into evidence.¹¹ (Docket Nos. 195-1; 201 at 18). There being no objection, the Court admitted same. (Docket No. 201 at 19).

The FTC called Dr. Yarbrough to testify that IDI’s R-value claims were false and that Insultex’s R-value (regardless of thickness) was negligible at best. (*Id.* at 6-7). After the FTC rested, IDI moved to exclude or strike Dr. Yarbrough’s testimony. (Docket Nos. 196; 202 at 7-8). The Court stopped the trial, took the matter under advisement, ordered an expedited transcript, permitted supplemental briefing, and set the matter for argument. (Docket Nos. 197; 202 at 16-24). Additionally, because the FTC argued that the objections IDI raised in its motion to strike

¹⁰ Although the FTC represented that it would bring two rolls of Insultex with counsel to trial, the FTC never supplied J205j and J205k to the Court. *See* (Docket No. 201 at 19).

¹¹ IDI contends that while the FTC entered into evidence Docket Nos. 183 and 184, it failed to move for the admission of the applicable deposition transcripts. (Docket No. 225 at 2 n.2). While this Court agrees that the FTC failed to do so per this Court’s instructions at the Final Pretrial Conference, even considering said transcripts, the FTC’s claims fail. *See Late v. United States*, Civ. A. No. 1:13-CV-0756, 2016 WL 8787120, at *2 n.1 (M.D. Pa. Nov. 10, 2016) (stating a trial record can be reopened for clerical oversight). As mentioned at the Final Pretrial Conference, the Court was provided copies of the deposition transcripts prior to trial. (*Pretrial Conference Transcript* 7/23/19 at 118, 122, 125-26).

were discussed in Dr. Yarbrough's rebuttal deposition, this Court ordered production of the deposition transcripts and requested copies of the scientific sources that Dr. Yarbrough relied on in forming his opinion. (Docket Nos. 198-200; 202 at 22; 203-04). After careful consideration of the evidence and the parties' arguments, the Court ultimately granted IDI's motion finding that Dr. Yarbrough's testimony was not reliable, failed to fit the case, and was not credible. (Docket No. 218). In reaching its decision, the Court wrote,

[t]he [ASTM] C518 Standards are incorporated by reference in the FTC's R-value Rule and as such, are the prevailing standard in the industry. 16 C.F.R. § 460.5(e)(1)(ii); (Docket No. 201 at 33, 79). The Standards caution, however, that "[s]tandardization of this test method is not intended to restrict in any way the future development of improved or new methods or procedures by research workers." (J1 § 1.11; J2 § 1.11). Nonetheless, pursuant to *In re Zolof (Sertraline Hydrochloride) Products Liability Litigation*, any nonstandard techniques, i.e., ones that deviate from the R-value Rule or the [ASTM] C518 Standards, need to be well explained. 858 F.3d at 797 (3d Cir. 2017) (citing *Paoli II*, 35 F.3d at 758).

(*Id.* at 20-21).¹²

Following this Court's ruling, IDI moved for judgment under FED. R. CIV. P. 52(c). (Docket Nos. 224-25). The FTC filed a response in opposition, (Docket No. 227), to which IDI replied, (Docket No. 228). Before argument on IDI's motion, the FTC provided the Court with copies of the exhibits it planned to use at the May 1, 2020 Telephonic Hearing. (Docket No. 230). Neither party requested supplemental briefing and the transcript was filed on May 27, 2020. (*Id.*) The matter is now ripe for disposition.

III. LEGAL STANDARD¹³

Rule 52 of the Federal Rules of Civil Procedure reads:

(a) Findings and Conclusions.

(1) *In General.* In an action tried on the facts without a jury or with an advisory

¹² Captured is only a portion of this Court's decision. The memorandum opinion can be found at Docket No. 218 and Dr. Yarbrough's testimony at Docket Nos. 201-02.

¹³ This Court has jurisdiction pursuant to 15 U.S.C. § 45 and 28 U.S.C. §§ 1331, 1337(a), and 1345.

jury, the court must find the facts specially and state its conclusions of law separately. The findings and conclusions may be stated on the record after the close of the evidence or may appear in an opinion or a memorandum of decision filed by the court. Judgment must be entered under Rule 58. . . .

(c) Judgment on Partial Findings. If a party has been fully heard on an issue during a nonjury trial and the court finds against the party on that issue, the court may enter judgment against the party on a claim or defense that, under the controlling law, can be maintained or defeated only with a favorable finding on that issue. . . . A judgment on partial findings must be supported by findings of fact and conclusions of law as required by Rule 52(a).

FED. R. CIV. P. 52(a), (c) (emphasis added). As such, this Court’s decision must “be supported by subordinate factual findings.” *Fagal v. Marywood Univ.*, Civ. A. No. 3:14-02404, 2018 WL 1993790, at *1 (M.D. Pa. 2018), *aff’d*, 786 F. App’x 353 (3d Cir. 2019) (internal citation omitted).

In considering whether to grant judgment under Rule 52(c), the district court applies the same standard of proof, weighs the evidence, and assesses witness credibility¹⁴ as it would at the conclusion of the bench trial. *DLJ Mortgage Capital, Inc. v. Sheridan*, -- F.3d --, 2020 WL 5638667, at *9 (3d Cir. Sept. 22, 2020) (quoting *EBC, Inc. v. Clark Bldg. Sys., Inc.*, 618 F.3d 253,

¹⁴ A sister court in this Circuit recently wrote,

When making credibility determinations regarding the testimony of witnesses, a district court considers factors including variations in demeanor and tone of voice, . . . basis of knowledge, outside influence, bias, and extent to which testimony is self-serving, . . . evidentiary support for testimony, . . . and whether testimony is coherent, plausible, and internally consistent.

Finneman v. SEPTA, 308 F. Supp. 3d 855, 858 (E.D. Pa. 2018) (internal citations and quotations omitted). Similarly, the Third Circuit’s Model Jury Instructions guides:

[i]n weighing this opinion testimony, you may consider [his/her] qualifications, the reasons for [his/her] opinions, and the reliability of the information supporting those opinions, as well as the factors I have previously mentioned for weighing the testimony of any other witness. The opinion of [name of witness] should receive whatever weight and credit, if any, you think appropriate, given all the other evidence in the case.

In deciding whether to accept or rely upon the opinion of [name of witness], you may consider any bias that [name of witness] may have, including any bias that may arise from evidence that [name of witness] has been or will be paid for reviewing the case and testifying [or from evidence that [name of witness] testifies regularly and makes a large portion of [his/her] income from testifying in court].

Third Circuit Model Civil Jury Instruction 2.2 (updated October 2017).

272 (3d Cir. 2010)). Thus, the Court does not “view the evidence through a particular lens,” *id.* (quoting *EBC, Inc.*, 618 F.3d at 272-73), “draw any special inferences in the nonmovant’s favor[, or] concern itself with whether the nonmovant has made out a prima facie case,”¹⁵ *Giant Eagle, Inc. v. Federal Insurance Co.*, 884 F. Supp. 979, 982 (W.D. Pa. 1995) (citing 9A Charles A. Wright and Arthur R. Miller, *Federal Practice and Procedure: Civil* § 2573.1). Instead, the Court must assess the credibility of witnesses to determine whether the FTC has “demonstrated a factual and legal right to relief by a preponderance of the evidence.” *Parker v. Long Beach Mortg. Co.*, 534 F. Supp. 2d 528, 535-36 (E.D. Pa. 2008) (citing *Rego v. ARC Water Treatment Co. of Pa.*, 181 F.3d 396, 399-400 (3d Cir. 1999)) (“[i]n cases in which a district court enters a judgment under Rule 52(c), the district court can resolve disputed factual questions”).

The United States Court of Appeals for the Third Circuit recently wrote the following about granting a Rule 52(c) motion:

We have explained that any party may make a Rule 52(c) motion, and the court may grant such motion, at any time during a bench trial, so long as the party against whom judgment is to be rendered has been fully heard with respect to an issue essential to that party’s case. But that a party be fully heard does not mean that a party must be allowed to introduce every shred of evidence that a party wishes, without regard to the probative value of that evidence. As a result, the court need not wait until that party rests its case-in-chief to enter judgment pursuant to Rule 52(c). In this respect, it is within the discretion of the trial court to enter a judgment on partial findings even though a party has represented that it can adduce further evidence, if under the circumstances, the court determines that the evidence will have little or no probative value. In addition, even if the district court believes judgment in favor of the moving party would be appropriate, it remains within the district court’s discretion to wait until the non-movant has presented her case or all probative evidence is admitted before entering judgment.

DLJ Mort. Capital, Inc., 2020 WL 5638667, at *5 (internal citations and quotations omitted).

With these standards in mind, the Court makes these findings of fact and conclusions of

¹⁵ “The rule’s objective is to ‘conserve[] time and resources by making it unnecessary for the court to hear evidence on additional facts when the result would not be different even if those additional facts were established.’” *EBC, Inc.*, 618 F.3d at 272 (quoting 9 James Wm. Moore et al., *Moore’s Federal Practice* § 52.50(2) (3d ed. 2010)).

law pursuant to Rule 52 of the Federal Rules of Civil Procedure. FED. R. CIV. P. 52.

IV. FINDINGS OF FACT¹⁶

A. Background about IDI and the History of Insultex

IDI is a Delaware corporation with a principal place of business in Pittsburgh, Pennsylvania. (*Pretrial Stipulations*, Docket No. 127 ¶ 1). It was founded in 2002. (*Id.* ¶ 2). It has three full-time employees: Joseph Riccelli, Joseph Riccelli Jr., and Greg Domian. (*Id.* ¶ 3). Joseph Riccelli is IDI's founder and CEO. (*Id.*) He oversees the corporation's day-to-day operations. (*Id.*) Greg Domian is responsible for sales. (*Id.*) Joseph Riccelli Jr. monitors and ships the inventory. (*Id.*)

IDI was established to manufacture and sell cold weather gear and clothing. (J57-J61). However, once the company realized how popular its products were, it began to consider other possible uses for its technology. (*Id.*) It sent samples to Vartest Laboratory, Inc. to determine if the material had an R-value. (*Id.*) IDI then contacted Randolph Loew, the owner and sole employee of Satesa Corporation, about the possibility of making a house wrap. (*Pretrial Stipulations*, Docket No. 127 ¶ 4). The result was Insultex, which is made of three components: a film, a webbing for drainage, and foam. (*Id.* ¶ 6).

House wraps are added just inside the external walls of a house or building during construction, and they function as a weather-resistant barrier. (*Id.* ¶ 5). Their purpose is twofold: (1) to prevent rain from penetrating; and (2) to allow water vapor from inside the house to escape so that moisture does not accumulate inside the walls. (*Id.*)

¹⁶ These findings are made upon consideration of the evidence offered at trial. (*See* Docket Nos. 190; 195-1; 201-02). As previously noted, "[i]n a bench trial, it is the province of the judge sitting as the trier-of-fact to evaluate the credibility of witnesses and weigh the evidence." *Wesley v. Grigorievna*, Civ. A. No. 16-1004, 2016 WL 4493691, at *8 n.8 (W.D. Pa. Aug. 26, 2016) (citing *Brisbin v. Superior Valve Co.*, 398 F.3d 279, 288 (3d Cir. 2005)).

B. IDI's Testing of Insultex

The parties agree that standard ASTM C518 testing conducted on a single layer of R-3 rated Insultex has never returned an R-value of R-3. (*Pretrial Stipulations*, Docket No. 127 ¶ 35). Similarly, a standard ASTM C518 test conducted on a single layer of R-6 rated Insultex has never returned an R-value of R-6. (*Id.* ¶ 36). To this end, Intertek Laboratory found Insultex had an R-value of less than R-0.2 in April 2009. (*Id.* ¶ 37; J17). Vartest Laboratory, Inc., in August 2009, reported an R-value of less than R-0.3. (*Pretrial Stipulations*, Docket No. 127 ¶ 37).

In 2010, IDI approached BRC Laboratory, Inc. ("BRC") and Robert Manni to conduct testing on Insultex. (*Id.* ¶ 24). At the time, BRC was not accredited to conduct ASTM C518 testing. (*Id.* ¶ 25). From 2010 until 2013, BRC borrowed a thermal resistance testing unit from Federal Fabrics Fibers, Inc. ("FFF") for its measurements. (*Id.* ¶¶ 26-27).

Believing that FFF's apparatus was producing inaccurate results, IDI paid BRC to build a thermal resistance testing unit to conduct "modified" ASTM C518 testing. (*Id.* ¶ 27). This new testing device had ¾-inch air gaps built into the hot and cold sides of the unit.¹⁷ (*Id.*) In 2015, once the apparatus was completed, PJLA inspected it and accredited BRC to use it for ASTM C518 testing. (*Id.* ¶ 33).

PJLA provides "third party accreditation services" to laboratories. (PJLA Dep. Tr. 21:18-22:1). When it accredits a laboratory, PJLA ensures that the laboratory is competent to calibrate and perform the testing methods that it will be using. (*Id.* at 22:2-25:12). As a result, it can only accredit businesses in fields that it has the qualifications to do so. (*Id.* at 30:1-30:10). Once an entity is accredited, PJLA "go[es] in once per year" to ensure that it is acting in compliance with

¹⁷ The thermal resistance testing unit operates using software developed by Vincent Calio. (*Pretrial Stipulations*, Docket No. 127 ¶ 28). Vincent Calio works for a company called Custom Systems and Controls, Inc., which IDI retained on or about May 2015. (*Id.*)

the accreditation. (*Id.* at 23:7-24:10). To confirm compliance, corporations maintain and follow a series of policies and procedures. (*Id.* at 24:11-24:20). Laboratories desire to be accredited because it allows them to represent to end users that they are competent to perform specific testing. (*Id.* at 22:10-23:6). It is important to note that PJLA is only an accreditation company. (*Id.* at 196:6-196:14). It does not certify testing results. (*Id.*)

Douglas Berg, PJLA's program manager, was part of the executive committee that made the final accreditation decision when it came to BRC. (*Id.* at 42:1-42:17). RK Varma, a subcontractor, was responsible for the initial assessment, and Michael Kramer assisted in "signing off on the corrective action responses for BRC." (*Id.* at 42:1-42:17, 48:20-48:25). RK Varma first visited BRC in September 2014. (*Id.* at 81:16-82:8). He is a retired engineer and previously served as a chief engineer working mostly with thermal-generation companies on building energy efficiency. (*Id.* at 49:1-49:14). He is very familiar with thermal transfer, heat transfer, and measuring conductivity and resistivity despite not having overwhelming experience in ASTM C518 testing. (*Id.* at 49:23-50:8). Douglas Berg was responsible for its reassessment.¹⁸ (*Id.* at 81:22-82:8).

PJLA issued BRC's accreditation in 2015 and a corrective certificate to include "ASTM C518 modified" in August that same year. (*Id.* at 139:21-139:23, 144:24-147:5). In accrediting BRC for modified testing, PJLA testified that it understood its accreditation to mean that BRC could make "some modifications" to the testing. (*Id.* at 146:6-147:3). For example, BRC might use sandwiching, layering, and things of that nature. (*Id.* at 149:19-150:8). Despite visiting BRC on at least three occasions, PJLA was unaware that BRC was using air gaps in its testing. (*Id.* at 157:1-157:21). This is because PJLA's representative never actually observed any testing. (*Id.* at

¹⁸ This is the only accreditation for ASTM C518 testing that PJLA has done. (PJLA Dep. Tr. 59:11-59:21).

118:4-19:19, 122:4-122:14). Despite this fact, PJLA was unwilling to agree with the FTC that using air gaps would be an inappropriate method under its accreditation. (*Id.* at 155:15-157:10).

BRC performed numerous tests on Insultex from 2010 until 2016 and consistently found that the R-value of the product was R-3 or R-6 depending on the thickness. (J4-J13; J21-25; J29-J34). After every test, BRC provided IDI with Certificates of Analysis. (Docket No. 127 ¶ 30; J4-J13; J23-J27). Every certificate reported the results of testing that used ¾-inch air gaps bounding each side of the Insultex sample. (*Pretrial Stipulations*, Docket No. 127 ¶ 30). Yet, the certificates reported that BRC complied with ASTM Guidelines. (J4-J13; J23-J27).

C. The Advertisements at Issue and the FTC’s Discovery of Same

IDI stated that in making the following claims about Insultex, it relied on BRC’s results, customer testimonials, and the first-hand knowledge that it learned from selling cold weather products and clothing. (*Pretrial Stipulations*, Docket No. 127 ¶ 29). In its marketing materials, IDI described Insultex as “THE THINNEST INSULATED HOUSE WRAP WITH AN R-VALUE.” (J74). Beginning in 2011, IDI began claiming that Insultex had an R-value of R-3. (*Pretrial Stipulations*, Docket No. 127 ¶ 10). Three years later, IDI started marketing Insultex with an R-value of R-6. (*Id.* ¶ 12). It further represented that Insultex would result in energy savings.¹⁹ (*Id.* ¶¶ 14, 22).

IDI also distributed marketing materials and information about Insultex to its sales representatives who, in turn, gave the same to their customers and the public.²⁰ (*Id.* ¶ 17; J74). IDI’s brochures repeat its claims that Insultex is the thinnest insulated house wrap with an R-value and that its product has an R-value of R-3 or R-6 depending on thickness. (J74 at 2; J138). They

¹⁹ IDI has not commissioned any studies to confirm its energy savings claims; instead, it has relied on the general scientific principle that R-value correlates to energy savings. (*Pretrial Stipulations*, Docket No. 127 ¶ 14).

²⁰ Installation instructions are provided with the house wrap when it is purchased. (*Id.* ¶ 15). They are given to independent builders, dealers, installers, and building supply stores. (*Id.* ¶ 16).

further declare that these results are supported by ASTM C518 testing. (J74 at 3). Included as part of these materials are BRC's Certificates of Analysis.²¹ (*Pretrial Stipulations*, Docket No. 127 ¶ 31). IDI posted these same claims on its publicly accessible website from October 7, 2010 through October 2016. (*Pretrial Stipulations*, Docket No. 127 ¶ 18; J72).

Insultex retails for \$279 for a 5'x100' roll of its R-6 product, and \$223.52 for the same size roll of its R-3 product, or \$0.56 and \$0.45 per square foot, respectively. (*Pretrial Stipulations*, Docket No. 127 ¶ 20). In contrast, other widely available house wraps that do not claim an R-value retail between \$0.06 and \$0.24 per square foot. (*Id.*) IDI's gross sales of Insultex totaled \$1,305,566.50 through August 29, 2018.²² (*Id.* ¶ 21).

Neither the FTC nor IDI received consumer complaints about Insultex. (*Id.* ¶ 38). The FTC only learned of a potential Section 5(a) violation through one of IDI's competitors, Kimberly-Clark Global Sales, LLC. (J16).

D. Deposition Testimony of Dr. Mavrokefalos²³

Now that Dr. Yarbrough's testimony had been stricken, the only expert that the FTC relied on in its case-in-chief was Dr. Mavrokefalos whose testimony was introduced by means of deposition. (Docket Nos. 183, 190). Despite the parties stipulating to Dr. Yarbrough's and Dr. Malen's qualifications, they were unwilling to do so as to Dr. Mavrokefalos. (*See* Docket No. 186). So, the Court makes the following findings as to his background and experience.

He has a Ph.D. in mechanical engineering from the University of Texas and is an assistant professor at the University of Houston. (J232 at 1-3). His research is directed at "address[ing]

²¹ It bears mentioning that the brochures contain several other claims about Insultex including that it is water, air, and UV resistant and is permeable, durable, and translucent. (J138 at 5). The FTC has not challenged these claims. (*See* Docket No. 1).

²² This is the most up-to-date information available to the Court.

²³ The materials Dr. Mavrokefalos considered, including his CV, notes, and the images of the infrared testing, have been admitted into evidence. (J230-J234). His expert reports were not introduced. (Docket No. 195-1). But, IDI had planned to move for the admission of Dr. Mavrokefalos's initial report during its case-in-chief. (Docket No. 191).

global challenges in energy and sustainability.” (*Id.* at 3). At the time of his April 2018 deposition, he had twelve years of experience working in the field of heat transfer. (4/16/18 Mavro Dep. Tr. 184:23-185:14).

The Court now turns to Dr. Mavrokefalos’s testimony found at Docket Nos. 183 and 190.²⁴ Dr. Mavrokefalos began by stating that he knew that the FTC had sued IDI for false marketing. (4/16/18 Mavro Dep. Tr. 35:22-36:2, 36:5-36:23). When asked about his knowledge of IDI’s representations related to Insultex, he responded that he was aware that IDI claimed that it had a product with an R-value of R-6 and a second with an R-value of R-3. (*Id.* at 36:8-36:16). He continued that “if Insultex has a high R-value, then that means it has high insulating capabilities, which translates to energy savings for a consumer if he uses their[sic] product in their[sic] home.” (*Id.*)

Dr. Mavrokefalos explained that he had seen BRC’s heat flow meter and built into the device were ¾-inch air gaps. (Docket No. 190 at 44; 4/16/18 Mavro Dep. Tr. 45:4-45:9). As a result, it was his opinion that BRC’s heat flux transducer incorporated the value of the air gaps into every reading; thereby, distorting the R-value results. (Docket No. 190 at 44; 10/30/18 Mavro Dep. Tr. 74:17-75:21). Dr. Mavrokefalos hypothesized that these air gaps had some impact on the apparatus’s ability to accurately measure a material’s R-value.²⁵ (10/30/18 Mavro Dep. Tr. 34:7-

²⁴ In its response in opposition, the FTC relies on portions of Dr. Mavrokefalos’s depositions which were never designated. (Docket No. 227). In addition, the Court has not considered the FTC’s counter-designations as IDI has not yet moved for the admission of its own designations. (Docket Nos. 201-02); *see* FED. R. CIV. P. 26(a)(3)(A) (this rule contemplates parties designating deposition testimony that they intend to offer at trial so that opposing counsel may file objections and counter-designations thereto); FED. R. EVID. 106 (“If a party introduces all or part of a writing or recorded statement, an adverse party may require the introduction, at that time, of any other part—or any other writing or recorded statement—that in fairness ought to be considered at the same time”); *Blue Cross & Blue Shield of N.J., Inc. v. Philip Morris, Inc.*, 199 F.R.D. 487, 488-89 (E.D. N.Y. 2001) (permitting the plaintiff to play for the jury portions of depositions recorded on videocassettes during its case-in-chief without also presenting the counter-designations of the defendant due to the volume and complexity of the material depicted in same). Accordingly, the Court will not consider the FTC’s counter-designations.

²⁵ Although the FTC represents that Dr. Mavrokefalos testified that the R-value of the air gaps was greater than R-1, that portion of his deposition testimony was not designated. (Docket Nos. 183; 190; 227 at 7).

35:18).

He also had the opportunity to review BRC's testing results and had questions about 30-40% of them. (Docket No. 190 at 17; 10/30/18 Mavro Dep. Tr. 179:9-180:6). He was particularly concerned that BRC had not allocated sufficient time for temperature stabilization and that the heat flux transducer data reflected excessive scattering. (*Id.*) Dr. Mavrokefalos did not articulate the effect those issues had on the results other than to suggest that BRC should have accounted for them. (Docket No. 190 at 17-18; 10/30/18 Mavro Dep. Tr. 181:19-183:3).

Although Dr. Mavrokefalos once believed that Insultex had the R-values it advertised, he now opined that such was no longer the case. (Docket No. 190 at 7-8; 10/30/18 Mavro Dep. Tr. 18:4-18:12, 21:11-22:4). The following exchange occurred at Dr. Mavrokefalos's October 30, 2018 deposition:

Q. And you were going to offer [an] opinion on how scientifically accurate the R-values are -- were or are.

A. Correct.

Q. You were going to offer an opinion about -- that the R-value of the 5-millimeter Insultex foam is R-3?

A. Correct.

Q. And you were going to offer an opinion that the R-value of the 1-millimeter Insultex foam was R-6?

A. Correct.

(Docket No. 190 at 7; 10/30/18 Mavro Dep. Tr. 18:4-18:12).²⁶ Later, he stated that he now believed with a reasonable degree of scientific certainty that Insultex (the foam and woven layer) had an R-value less than R-1, whatever the thickness. (Docket No. 190 at 6, 40; 10/30/18 Mavro Dep. Tr. 79:11-79:21). He hypothesized that although Insultex's woven layer added at least as

²⁶ The products here were 1.0 and 1.5 millimeters. (*Id.* at 5).

much to the product's insulation capacity as the foam, together they would still not create a product with an R-value greater than R-1. (10/30/18 Mavro Dep. Tr. 79:18-80:16).

After reviewing the FTC's experts' reports, Dr. Mavrokefalos decided to conduct a further investigation into Insultex's claims. (Docket No. 190 at 10; 10/30/18 Mavro Dep. Tr. 27:6-28:7). He did so first by asking whether BRC's equipment needed to be re-calibrated. (Docket No. 190 at 10; 10/30/18 Mavro Dep. Tr. 27:9-28:7). He requested that BRC test various reference materials including a copper plate to determine whether its results were consistent with those of his laboratory. (Docket No. 190 at 10-12; 10/30/18 Mavro Dep. Tr. 29:7-29:20, 30:2-33:10). After comparing the results, he concluded that BRC's apparatus was not always reliable, especially where the material had an R-value less than R-1. (Docket No. 190 at 13; 10/30/18 Mavro Dep. Tr. 34:7-35:18, 36:18-37:5).

Second, Dr. Mavrokefalos conducted three tests — Laser Flash, Fin Equation, and Infrared Imaging. (Docket No. 190). He decided to perform three different tests because there were errors associated with each of them. (10/30/18 Mavro Dep. Tr. 108:11-109:12). He did not explain what those errors could be. (Docket Nos. 183; 190). For the first test, he borrowed a laser flash system from a colleague. (Docket No. 190 at 20; 10/30/18 Mavro Dep. Tr. 37:15-37:21). Prior to performing the test, he had to be trained on the equipment by one of his colleague's students because this was his first time using this method. (10/30/18 Mavro Dep. Tr. 38:12-38:17).

According to Dr. Mavrokefalos, "[a] laser flash system is an apparatus that measures the thermal diffusivity of [a] material," and "'thermal diffusivity' is the ratio of thermal conductivity over density and – specific density." (Docket No. 190 at 20; 10/30/18 Mavro Dep. Tr. 37:22-38:2) From the thermal diffusivity of a material, an expert can derive the product's R-value. (Docket No. 190 at 21). To perform this test, "a light source is shined on one side of the sample, which

causes the temperature to rise on one side of -- the sample” and “the apparatus measures the temperature [on] the other side of the material as a function of time.” (10/30/18 Mavro Dep. Tr. 41:3-41:12).

Despite this being the first time that he employed this test, Dr. Mavrokefalos believed that his results were within 0.1 of the actual R-value. (Docket No. 190 at 22; 10/30/18 Mavro Dep. Tr. at 54:23-55:7). He determined that the foam of the R-10 sample had an R-value of 0.08.²⁷ (Docket No. 190 at 22; 10/30/18 Mavro Dep. Tr. 54:13-54:22). He then found that the R-6 sample (foam only) had an R-value of 0.1, and the R-3 sample (foam and woven nylon) had an R-value of 0.164. (10/30/18 Mavro Dep. Tr. 56:7-57:10, 57:12-58:13). When the tests were performed using black tape, Insultex’s R-values were still less than R-1.²⁸ (*Id.* at 60:7-62:6).

The second test Dr. Mavrokefalos conducted involved placing two samples across two heaters, one of which was the foam from the R-6 sample and the other was a reference sample. (Docket No. 190 at 26-27; 10/30/18 Mavro Dep. Tr. 66:5-66:10). After mapping the micro-thermocouples across the length of the sample, Dr. Mavrokefalos used the Fin Equation to calculate its R-value. (10/30/18 Mavro Dep. Tr. 66:11-66:22, 72:5-72:24). He concluded that “the thermal conductivity of the R-6 [material was] approximately half of the thermal conductivity of the Amazon sample” making Insultex’s true R-value approximately 0.6. (Docket No. 190 at 29-30; 10/30/18 Mavro Dep. Tr. 73:3-73:23). Like the first test, Dr. Mavrokefalos had never used this method before. (Docket No. 190 at 27; 10/30/18 Mavro Dep. Tr. 67:1-67:6). That said, he had taught the theory behind it in an undergraduate course. (*Id.*) And, he suggested it was a “standard textbook undergraduate method.” (Docket No. 190 at 27; 10/30/18 Mavro Dep. Tr. 66:23-67:6).

²⁷ The R-10 sample is not a subject of the instant litigation.

²⁸ It is unclear from the Court’s limited record why black tape was used.

The third study he performed involved the use of an infrared camera. (Docket No. 190 at 32). Although he testified that the test was “widely used,” he noted:

You have to do a lot of calibration to get actual quantifiable numbers. But since I did this test by asking basically a favor from my colleague – because it’s not my infrared camera. . . [,] I didn’t want to spend too much time in calibrating everything and getting hard, quantifiable numbers; but it was – it is good enough to make a comparable study.

(*Id.*; 10/30/18 Mavro Dep. Tr. 82:17-83:4, 103:24-104:5) (emphasis added). For this test, Dr. Mavrokefalos placed two samples on a heater, one being a reference sample and the other being Insultex. (10/30/18 Mavro Dep. Tr. 84:1-84:25). On top of each sample, he placed a silicon wafer. (*Id.* at 87:1-87:25). He did this so that he would not have to adjust for the emissivity of same in order to find the “temperature difference between those two.” (*Id.*) He suggested that this technique was “widely known and accepted.” (*Id.*) Using this test, he concluded that the R-value of the R-6 sample was below the R-value of the calibration sample, meaning it was less than R-1. (Docket No. 190 at 33; 10/30/18 Mavro Dep. Tr. at 88:4-88:5, 96:8-96:24). Dr. Mavrokefalos testified that he had used this method twice before and had communicated the results to IDI. (10/30/18 Mavro Dep. Tr. 84:1-84:18, 109:13-109:15).

In concluding that Insultex had R-values of less than R-3 and R-6, Dr. Mavrokefalos relied only on his own testing. (*Id.* at 112:23-115:5). Based on the R-values he found, Dr. Mavrokefalos would not expect IDI’s consumers to see any tangible energy savings. (Docket No. 190 at 41; 10/30/18 Mavro Dep. Tr. 185:12-186:3). Although he did acknowledge that it is accepted in the scientific community that the higher the R-value, the higher the expected energy savings. (Docket No. 190 at 41; 10/30/18 Mavro Dep. Tr. 184:25-185:11). He stated that he held his opinions to a reasonable degree of scientific certainty and used methods that other experts in his field would use to determine the thermal properties of a material. (10/30/18 Mavro Dep. Tr. 115:11-115:25).

Dr. Mavrokefalos opined that IDI had a reasonable basis for its R-value representations prior to his testing. (*Id.* at 116:1-116:23, 121:12-121:20). That said, later in his testimony, after being presented with additional evidence, he changed his mind and suggested that IDI never had a reasonable basis for making its claims. (*Id.* at 154:9-154:14, 155:5-155:24). Finally, he testified it was concerning that the data on BRC's Certificates of Analysis pertaining to Insultex did not change from year to year. (*Id.* at 192:21-194:3).

V. CONCLUSIONS OF LAW

Although both parties agree that Dr. Malen is a rebuttal expert and his opinion cannot be considered at this juncture, they devote much of their briefing to his expert opinions and his bases for same. (Docket No. 227 at 21-24). Consequently, the Court must first address this issue before turning to the merits of the FTC's Section 5(a) claim.

A. Whether the Court should consider the proffered testimony of Dr. Malen, the FTC's rebuttal expert?

As set forth at length in Section III of this Memorandum Opinion, judgment can be entered against a party if that party was "'fully heard' with respect to an issue essential to that party's case." *DLJ Mort. Capital, Inc.*, 2020 WL 5638667, at *5 (quoting *EBC, Inc.*, 618 F.3d at 271). Having rested its case, the FTC has been fully heard on each of the three counts that it has brought against IDI. *See EBC, Inc.*, 618 F.3d at 274 n.23 (providing "[h]aving rested its case, State Steel was heard fully on its two remaining causes of action. State Steel's tactical decision to permit the admission of A & M's exhibits without objection, and its failure to adduce additional testimony enabling it to challenge that evidence, cannot be ascribed as the failure of the District Court to ensure that it had been 'fully heard'").

The FTC opted not to call Dr. Malen as part of its case-in-chief and has repeatedly

represented that it would only call him on rebuttal.²⁹ (Docket Nos. 121; 187 at 2; 194; 201-02). It stated such in both witness lists, at the Final Pretrial Conference, and in its opening statement. (*Id.*) After the FTC rested, IDI immediately moved for partial judgment before putting on any evidence. (Docket No. 202). Because IDI never called Dr. Garlotta and Dr. Yarbrough was eliminated as FTC's expert, there is no expert testimony in the record that Dr. Malen can rebut. *See Peals v. Terre Haute Police Dept.*, 535 F.3d 621, 630 (7th Cir. 2008) ("The proper function of rebuttal evidence is to contradict, impeach[,] or defuse the impact of the evidence offered by an adverse party") (internal citation and quotation omitted); *FTC v. IDI*, Civ. A. No. 16-1669, 2018 WL 3611510, at *3 (W.D. Pa. July 27, 2018) (citing *Wonderland Nurserygoods Co. v. Thorley Indus., LLC*, Civ. A. No. 12-196, 2014 WL 695549, at *3 (W.D. Pa. Jan. 23, 2014) (Unlike expert testimony used as part of a party's case-in-chief, the function and scope of an expert's testimony on rebuttal is limited. It must "explain, repel, counteract[,] or disprove the evidence of the adverse party"). Accordingly, this Court cannot consider Dr. Malen's expert opinion. Moreover, as stated in this Court's memorandum opinion on IDI's motion to strike, the FTC has proffered no basis to reopen its case-in-chief. (Docket No. 218 at 28-30).

The Court now turns to the substantive issues raised by the parties. (*See* Docket Nos. 1; 127).

B. Whether, as set forth in the Complaint, IDI violated Section 5(a) in connection with the advertising, promotion, offering for sale, or sale of Insultex?

The FTC asserts that IDI deceived its customers by making false and unsubstantiated claims when it advertised Insultex as having R-values of R-3 and R-6, represented that it had

²⁹ To be clear, the Federal Rules contemplate the use of expert testimony on rebuttal. FED. R. CIV. P. 26(a)(2)(D)(ii) (permitting expert testimony "intended solely to contradict or rebut evidence on the same subject matter identified by another party"); *see also* FED. R. EVID. 611. The decision whether to allow rebuttal evidence lies within the discretion of the trial judge. *IDI*, 2018 WL 3611510, at *2.

testing to prove these results, and stated that using Insultex would result in energy savings to consumers. (Docket Nos. 171 at 5; 189 at 1; 201 at 3). Section 5(a) of the FTC Act prohibits “[u]nfair methods of competition in or affecting commerce, and unfair or deceptive acts or practices in or affecting commerce.” 15 U.S.C. § 45(a)(1). To prevail on its claims, the FTC must prove by a preponderance of the evidence that: “(1) there was a representation; (2) the representation was likely to mislead consumers acting reasonably under the circumstances; and (3) the representation was material.” *FTC v. Click4Support, LLC*, Civ. A. No. 15-5777, 2015 WL 7067760, at *4 (E.D. Pa. Nov. 10, 2015) (quoting *FTC v. NHS Sys., Inc.*, 936 F. Supp. 2d 520, 531 (E.D. Pa. 2013)).

The parties agree that the first and third elements are satisfied. (Docket Nos. 227 at 2; 228). Indeed, the parties stipulated that IDI represented that Insultex has either an R-3 or an R-6, depending on the thickness of the product; it had testing to substantiate those results; and using its product would lead to energy savings. (*Pretrial Stipulations*, Docket No. 127 ¶¶ 7, 10-14; Docket No. 227 at 3); *see POM Wonderful, LLC v. FTC*, 777 F.3d 478, 490 (D.C. Cir. 2015) (an advertisement conveys a representation where consumers acting reasonably under the circumstances would interpret the advertisement to contain that message). The parties also agree that because IDI made explicit claims about Insultex, its representations about its products’ R-value and energy savings are presumed to be material to the consumer’s purchasing decision. (Docket Nos. 227-28); *FTC v. NHS Sys., Inc.*, 936 F. Supp. 2d 520, 531 (E.D. Pa. 2013) (internal quotation and citation omitted) (a representation is material “if it contains information that is important to a consumer’s purchasing decision,” and “[e]xplicit claims or deliberately-made implicit claims are presumed to be material”). The parties disagree as to whether the second element is met. (Docket No. 227 at 3).

To satisfy its burden on the second element, the FTC must prove by a preponderance of the evidence that IDI's representations are misleading. *FTC v. Tashman*, 318 F.3d 1273, 1277 (11th Cir. 2003). Actual deception is not required nor is the intent to deceive. *NHS Sys., Inc.*, 936 F. Supp. 2d at 531; *FTC v. Millennium Telecard, Inc.*, Civ. A. No. 11-2579, 2011 WL 2745963, at *3 (D.N.J. July 12, 2011). Rather, the FTC must demonstrate that IDI's claims were misleading using either the "falsity" or "reasonable basis" theories. *Am. Home Prod. Corp. v. FTC*, 695 F.2d 681, 693 (3d Cir. 1982); *FTC v. Dutchman Enters., LLC*, Civ. A. No. 09-14, 2009 WL 10698040, at *3 (D.N.J. Feb. 11, 2009). The Court next addresses whether IDI's claims were misleading under the falsity theory.

1. *Falsity*

The FTC argues that IDI's R-value claims are false because:³⁰

- IDI never disclosed that its R-values could only be achieved with two ¾-inch air gaps;
- Dr. Mavrokefalos's testing further supports the FTC's position;
- BRC's machine cannot reliably measure R-value results; and
- IDI admitted in a pretrial stipulation that it did not have the substantiation it claimed it did.

(Docket Nos. 171; 227). To prevail under the falsity theory, the FTC must establish that the express or implied claims in IDI's advertisement are false. *See FTC v. Alcoholism Cure Corp.*, Case No. 3:10-cv-266-J-34JBT, 2011 WL 13137951, at *26 (M.D. Fla. Sept. 16, 2011). A claim of product effectiveness is "false" where evidence developed under accepted standards of scientific research demonstrates that the product does not work as represented. *FTC v. Pantron I Corp.*, 33 F.3d 1088, 1097 (9th Cir. 1994) (emphasis added). When the FTC challenges the veracity of a

³⁰ In its Pretrial Brief, the FTC also asserted: (1) ASTM C518 testing is the widely accepted industry standard for measuring R-value in home insulation; (2) Dr. Yarbrough's testing using same proves Insultex's R-values are 1000% lower than claimed; and (3) other laboratories found similarly. (Docket No. 171). For the interest of completeness, this Court has addressed the arguments raised both in the FTC's response in opposition and in its pretrial briefing. (See Docket Nos. 171, 189).

corporation's R-value and energy saving claims, expert testimony is required. *See United States v. Sumpolec*, 811 F. Supp. 2d 1349, 1354 (M.D. Pa. 2011) (granting the FTC's motion for summary judgment because the defendant proffered no expert evidence to refute the FTC's expert's report).

In this Court's estimation, the FTC has not met its burden under the falsity theory given that there is no reliable or credible evidence in the record demonstrating that IDI's claims are false. The FTC called two experts during the trial, Dr. Yarbrough and Dr. Mavrokefalos. (Docket Nos. 180; 190; 194; 201-02). This Court has already stricken the FTC's key expert finding that Dr. Yarbrough's testimony was not reliable, did not fit the case, was not expressed to a reasonable degree of scientific certainty, and was not credible. (Docket No. 218 at 15-28). Dr. Mavrokefalos's testimony fails for many of the same reasons. *See In re Unisys Savings Plan Litig.*, 173 F.3d 145, 158 (3d Cir. 1999) (explaining "[w]hen the role of the gatekeeper to admit or exclude evidence (the judge) and the role of the factfinder to assess and weigh the evidence that was admitted (the jury) are one and the same, the judge who becomes the factfinder as well as the gatekeeper must be given great deference by this Court, and, as we note below, should not be required to waste judicial time"); *Wesley*, 2016 WL 4493691, at *8 n.8.

The Court now revisits Dr. Mavrokefalos's testimony. First, like Dr. Yarbrough, Dr. Mavrokefalos relied on non-standard tests. *See* (Docket No. 218 at 22). In its opening statement, the FTC asserted that ASTM C518 testing was the standard par excellence for finding a material's R-value. (Docket No. 201 at 6). This Court agreed, writing that:

The [ASTM] C518 Standards are incorporated by reference in the FTC's R-value Rule and as such, are the prevailing standard in the industry. 16 C.F.R. § 460.5(e)(1)(ii); (Docket No. 201 at 33, 79). The Standards caution, however, that "[s]tandardization of this test method is not intended to restrict in any way the future development of improved or new methods or procedures by research workers." (J1 § 1.11; J2 § 1.11). Nonetheless, pursuant to *In re Zolof (Sertraline Hydrochloride) Products Liability Litigation*, any nonstandard techniques, i.e., ones that deviate from the R-value Rule or the [ASTM] C518 Standards, need to be well explained.

858 F.3d at 797 (3d Cir. 2017) (citing *Paoli II*, 35 F.3d at 758). (Docket No. 218 at 20-21). Yet, none of the tests that Dr. Mavrokefalos conducted utilized a C518 testing apparatus, and he fails to explain why that is the case. (Docket No. 190). Guided by its previous ruling, this Court gives his testimony no weight. *See Ass'n of N.J. Rifle & Pistol Clubs Inc. v. Att'y Gen. N.J.*, --F.3d--, 2020 WL 5200683, at *6 n. 9 (3d Cir. Sept. 1, 2020) (quoting *Hayman Cash Register Co. v. Sarokin*, 669 F.2d 162, 165 (3d Cir. 1982)) (explaining that “[u]nder the law of the case doctrine, once an issue is decided, it will not be relitigated in the same case, except in unusual circumstances”).

Second, Dr. Mavrokefalos’s expert opinion is simply not reliable. He testified that he had almost no experience running any of the three tests he employed. (Docket No. 190 at 27; 10/30/18 Mavro Dep. Tr. 38:12-38:17, 67:1-67:6, 84:1-84:18, 109:13-109:15). He also admitted that he was less concerned about device calibration as he was only trying to determine the relative R-value of Insultex. (Docket No. 190 at 32; 10/30/18 Mavro Dep. Tr. 82:17-83:4, 103:24-104:5). In addition, despite conducting three separate tests because he was concerned about the accuracy of his results, Dr. Mavrokefalos never explained what the known errors were associated with each test or how they impacted his results. (Docket Nos. 183; 190). Further, he only provided the known or potential rate of error for one of his tests, the Laser Flash test. (Docket No. 190 at 22; 10/30/18 Mavro Dep. Tr. 54:13-54:22). Although he opined that he was using standard techniques found in the scientific community, he did not state whether they were typically used to calculate R-value, what the standards for each test were, whether he complied with same, whether his techniques had been subjected to peer review, and the non-judicial uses to which each method has been put. (Docket Nos. 183; 190). He also never opined as to whether his qualifications and experience rendered him proficient to perform each technique. (*Id.*) Given that he had to be

trained on how to perform the Laser Flash test and had never or almost never performed the remaining tests, the Court questions whether he was. (Docket No. 190 at 27; 10/30/18 Mavro Dep. Tr. 38:12-38:17, 67:1-67:6, 84:1-84:18, 109:13-109:15). For these reasons as well, the Court cannot find that Dr. Mavrokefalos had reasonable grounds for his opinion. *See UGI Sunbury LLC v. A Permanent Easement for 1.7575 Acres*, 949 F.3d 825, 834 (3d Cir. 2020) (finding expert reports unreliable where “they lack any suggestion that the ‘damaged goods theory’ has been subject to peer review or enjoys general acceptance. Nor do they contain any analysis of a known or potential rate of error. Or any standards controlling the theory’s application”); *Schneider ex rel. Estate of Schneider*, 320 F. 3d 396, 404 (3d Cir. 2013) (providing testimony is reliable where it is “based on the ‘methods and procedures of science’ rather than on ‘subjective belief or unsupported speculation;’ the expert must have ‘good grounds’ for his on her belief”).

Third, not all of Dr. Mavrokefalos’s testing was performed on the advertised product. Insultex consists of a film, a webbing for drainage, and foam. (*Pretrial Stipulations*, Docket No. 127 ¶ 6). At least two of his tests, the Laser Flash Test and the Fin Equation, were conducted on only one or two of the components of Insultex. (Docket No. 190 at 26-27; 10/30/18 Mavro Dep. Tr. 56:7-57:10, 57:12-58:13; 65:5-65:10). Based on same, Dr. Mavrokefalos stated that he did not believe that Insultex had an R-value of R-1 but he was only opining about the foam and the woven layer. (Docket No. 190 at 6, 40; 10/30/18 Mavro Dep. Tr. 79:11-79:21). Thus, it appears that an evidentiary link is missing between Dr. Mavrokefalos’s testing and what the FTC seeks to have the Court find as false. *See Pineda v. Ford Motor Co.*, 520 F.3d 237, 249 (3d Cir. 2008); *Pantron I Corp.*, 33 F.3d at 1097.

Fourth, despite the FTC representing that Dr. Mavrokefalos performed testing on the various products presently before the Court, he not only described a sample with an R-value of R-

10 but he also seemed unaware that the FTC mischaracterized the thickness of IDI's R-3 and R-6 products. (Docket No. 190 at 7, 22; 10/30/18 Mavro Dep. Tr. 18:4-18:12, 54:13-54:22). Curiously, despite these gaffes, there is no errata sheet attached to his deposition.³¹ (Docket Nos. 183; 190). It is likewise noteworthy that the FTC had the option of calling Dr. Mavrokefalos at trial to correct some of the gaps in his testimony but chose not to do so. (*See* Docket No. 161). For each of these reasons, the Court rejects his opinions.

The Court further finds that Dr. Mavrokefalos's testimony is not credible. As stated, he was previously IDI's expert. (Docket No. 110). He initially took the position that IDI had the R-values it claimed. (*Id.*) Despite being IDI's paid expert, Dr. Mavrokefalos only began to investigate IDI's claims after being confronted with the FTC's rebuttal experts' reports a year later. (Docket No. 190 at 10; 10/30/18 Mavro Dep. Tr. 27:6-28:7). Prior to this, he never considered that BRC's testing apparatus might be problematic, looked carefully at the results he had been given, or conducted his own testing. *See* (Docket No. 190); *see Finneman v. SEPTA*, 308 F. Supp. 3d 855, 858 (E.D. Pa. 2018) (internal citations and quotations omitted). Thus, the Court finds his testimony unworthy of belief.

In arguing that it has met its burden under Rule 52(c), the FTC also relies on other laboratory testing found in the record. (Docket Nos. 171; 227 at 4-5). However, without expert testimony, these results can only be considered for purposes of notice to IDI per this Court's prior ruling at the Final Pretrial Conference. (Docket Nos. 218; 201). In its Memorandum Opinion on IDI's motion to strike, this Court wrote:

As this Court insinuated to counsel at the [Final] Pretrial Conference, the problem with the test reports of other laboratories being used substantively is that nothing is known about the operator, the device calibration, the operator's methodology, the

³¹ An errata sheet allows a deponent to correct testimony that was misstated during a deposition. *See EBC, Inc.* 618 F.3d at 270-71. The review of a transcript and correction thereof is particularly important where the testimony is technical in nature like in the case *sub judice*. *See id.*

operator's knowledge of the [ASTM] C518 Standards or thermal principles, the error rates, how the results were obtained, etc. (Pretrial Conference Transcript 7/23/19 at 25). Consequently, the Court cannot consider everything contained in these reports "lock, stock[, and barrel." (*Id.*) In response to the Court's concerns at the [Final] Pretrial Conference, the FTC assured the Court that, "[w]e are going to have Dr. Yarbrough walk the [C]ourt through [the] standard [ASTM] C518 test and you'll be able to, based on the actual report, see whether they followed the method or not." (*Id.*) The problem now is that the parties dispute whether the FTC did so.

(Docket No. 218 at 17). Accordingly, the Court cannot consider these laboratory results for their asserted truth. (*See id.*)

Finally, to the extent that the FTC argues that IDI's claims are false because it did not have certain testing results, the FTC has not proffered any expert testimony to show BRC's testing did not conform with the ASTM C518 Standards. (Docket Nos. 171; 227; 230). The Standards permit innovation; thus, IDI's pretrial stipulations are not dispositive on this issue. (Docket No. 218 at 20-21). Adding credence to IDI's argument that air gaps comport with the accepted standards of the scientific community, PJLA was unwilling to agree that the use of this technique was inconsistent with its accreditation. (PJLA Dep. Tr. 155:15-157:10). Because the FTC has not established by a preponderance of the evidence that IDI's R-values were false, it cannot demonstrate that its energy savings claims are false as it has not put forth any independent evidence regarding same. Therefore, the Court finds that the FTC has failed to meet its burden under the falsity theory.

2. *Reasonable Basis*

The FTC next asserts that IDI's claims lacked a reasonable basis because IDI has not proffered sufficient scientific evidence to satisfy an expert in the relevant field that its claims are true. (Docket No. 227 at 4). In support of its argument, the FTC references the following:³²

- Dr. Mavrokefalos's testimony that BRC's apparatus yields unreliable R-value

³² In its pretrial briefing, the FTC also relied on the testimony of Dr. Yarbrough. (Docket Nos. 171; 189).

- results;
- IDI knew BRC was not accredited to conduct ASTM C518 testing when it hired the company;
 - In 2010, 2011, 2012, and “through at least 2013,” BRC tested Insultex on a unit that “was not built for C518;”
 - BRC provided IDI with test results on “Certificates of Analysis” to use as substantiation. “Every Certificate of Analysis reported results of testing conducted using 3/4-inch air gaps;”
 - It “spent approximately \$300,000 to build a thermal resistance testing unit to conduct ‘modified’ ASTM C518 testing;”
 - The “modified method” always employed 3/4-inch air gaps; and
 - IDI’s energy savings claims are unsubstantiated because Insultex has a nominal R-value and IDI cannot rely on costumer testimonials to meet its burden.

(*Id.* at 5-6).

To prevail under a “reasonable basis” or “substantiation” theory, the FTC must show that IDI lacked a reasonable basis for making the assertions in its advertisement. *See POM Wonderful, LLC*, 777 F.3d at 490. Said another way, IDI must possess the level of proof that it claimed in its advertisement. *See FTC v. QT, Inc.*, 448 F. Supp. 2d 908, 959 (N.D. Ill. 2006). There are two types of reasonable basis claims: establishment and non-establishment claims. *Id.*; *see POM Wonderful*, 777 F.3d at 491; *Letter to FTC*, 2015 WL 6396129, at *30 (FTC 2015). Establishment claims are those claims made where the advertiser states that the product is superior based on scientific testing while non-establishment or efficacy claims do not profess to be based on empirical proof. *QT, Inc.*, 448 F. Supp. 2d at 959. At issue, are establishment claims. (*See* Docket No. 171 at 15) (“IDI’s R-value claims *per se* convey that it has scientific proof because R-value can only be established by testing”).

“When the FTC brings an action based on the theory that advertising is deceptive because the advertisers lacked a reasonable basis for their claims, the FTC must: (1) demonstrate ‘what evidence would in fact establish such a claim in the relevant scientific community’; and (2) ‘compare . . . the advertisers’ substantiation evidence to that required by the scientific

community to see if the claims have been established.” *Alcoholism Cure Corp.*, 2011 WL 13137951, at *26 (quoting *FTC v. Direct Mktg. Concepts, Inc.*, 624 F.3d 1, 8 (1st Cir. 2010)). The Commission “‘determines what evidence would in fact establish such a claim in the relevant scientific community’ and ‘then compares the advertisers’ substantiation evidence to that required by the scientific community.’” *POM Wonderful, LLC*, 777 F.3d at 490-91 (quoting *Removatron Intern. Corp. v. FTC.*, 884 F.2d 1489, 1498 (1st Cir. 1989)). Reasonable basis is an objective standard that calls for the court to evaluate whether IDI had sufficient scientific evidence to satisfy an expert in the relevant field that the claim is true. *See, e.g., FTC v. Lights of Am., Inc.*, No. SACV10-01333 JVS (MLGx), 2013 WL 5230681, at *11, *20 (C.D. Cal. Sept. 17, 2013).

IDI has the burden of putting forth the substantiation it relied on to support its product claims, but the FTC has the burden of proving that IDI’s purported substantiation is inadequate. *See Alcoholism Cure Corp.*, 2011 WL 13137951, at *26. The FTC improperly attempts to shift the burden. *See id.* The FTC has argued at length that IDI’s testing lacks a reasonable basis because using 3/4-inch air spaces is a nonstandard technique. (Docket No. 171; 227). But as addressed in the preceding section and incorporated herein, it has offered no reliable or credible expert testimony to support its claims. As already stated, the other testing results in the record cannot be used for their truth. (Docket Nos. 201; 218).

Moreover, the fact that IDI disagreed with earlier results and commissioned BRC to create a “state-of-the-art” apparatus does not mean that IDI lacked a reasonable basis. After all, BRC was an accredited laboratory and PJLA, to date, still has not suggested that BRC’s methodology was inconsistent with the accreditation. (PJLA Dep. Tr. 155:15-157:10).

The FTC’s argument as to IDI’s energy savings claims fails for the same reasons. (Docket Nos. 171; 227). In the Federal Register it states that a high R-value leads to energy savings. *See*

70 Fed. Reg. 31258 (2005) (emphasis added) (R-value is the numerical measure of the ability of an insulation product to restrict the flow of heat and, therefore, to reduce energy costs—the higher the R-value, the better the product’s insulating ability). Because the FTC has not rebutted IDI’s substantiation representations concerning its R-value, it cannot now demonstrate IDI lacked substantiation for its energy saving claims. Thus, the Court finds that the FTC has failed to demonstrate by a preponderance of the evidence that the substantiation IDI had lacked a reasonable basis.

C. Means and Instrumentalities

The FTC has only mentioned its means and instrumentalities claim in passing. (Docket No. 227 at 5). The law is clear “those who put into the hands of others the means by which they may mislead the public, are themselves guilty of a violation of Section 5[(a)].” *See FTC v. Five-Star Auto Club, Inc.*, 97 F. Supp. 2d 502, 530 (S.D. N.Y. 2000) (internal citation and quotation omitted); *see FTC v. Winsted Hoisery Co.*, 258 U.S. 483, 494 (1922) (a person who furnishes another with the means of consummating a fraud is liable under the FTC Act); *Regina Corp. v. FTC*, 322 F.2d 765, 768 (3d Cir. 1963). Because the FTC failed to put forth sufficient evidence to establish that IDI’s representations were misleading, the FTC’s means and instrumentalities claim relating to IDI’s promotional materials must similarly fail. *See FTC v. NorVergence*, Civ. A. No. 04–5414(DRD), 2005 WL 3754864 (D. N.J. July 22, 2005).

VI. CONCLUSION

For these reasons, judgment will be entered in favor of the IDI and against the FTC.

An appropriate Judgment Order will follow.

/s/ Nora Barry Fischer
 Nora Barry Fischer
 Senior United States District Judge

Dated: September 24, 2020

cc/ecf: All counsel of record